# CLAIMS

What is claimed is:

1. A method of operating a sensor net, comprising:

detecting access attempts by one or several mobile devices to multiple nodes within said sensor net;

calculating a respective probability of future access by a mobile device for each of said multiple nodes in response to said detecting;

communicating information related to said calculated probabilities through said sensor net; and

routing measurement data for collection to respective ones of said multiple nodes using said calculated probabilities.

2. The method of claim 1 further comprising:

receiving probabilities of future access from a mobile device by least one node of said sensor net and communicating said received probabilities through said sensor net, wherein said routing further uses said received probabilities to route measurement data.

3. The method of claim 1 wherein said detecting, calculating, and communicating occur repetitively causing routing of measurement data to vary dynamically in response to changes in access patterns associated with mobile devices.

4. The method of claim 1 wherein said routing measurement data varies in response to the time of day when said routing is performed.

5. The method of claim 1 wherein said calculating calculates a time window average of detected access attempts.

6. The method of claim 1 wherein said communicating calculated probabilities comprises:

receiving a first portion of said information at a first node in said sensor net;

selecting a second portion from said first portion of information using calculated probabilities of future access; and

transmitting said second portion from said first node to a second node in said sensor net.

7. The method of claim 6 wherein said selecting removes information from said first portion using a cost function.

8. The method of claim 7 wherein said cost function calculates a path cost to a collection point.

9. The method of claim 8 wherein said cost function is a function of communication hops to a collection point.

10. The method of claim 1 wherein said routing comprises:

selecting a destination collection point using said communicated information.

11. The method of claim 1 wherein said routing comprises:

selecting multiple destination collection points using said communicated information.

12. The method of claim 11 wherein said selecting multiple destination collection points comprises:

calculating a group probability of access to at least one of said multiple destination collection points; and

comparing said calculated group probability of access to a threshold value.

13. The method of claim 1 wherein said routing comprises:

using a pseudo-random algorithm to distribute measurement data beyond optimal paths identified using said communicated information.

14. The method of claim 1 wherein said communicating comprises:

communicating information that is indicative of a change in previously communicated information related to said probabilities of future access.

15. The method of claim 1 wherein said mobile devices are cellular devices.

16. A sensor device for operation in a sensor net comprising:

means for detecting and recording attempts to access measurement data by mobile devices;

means for calculating a probability of future access by a mobile device to said sensor device using said recorded access attempts;

means for receiving information related to probabilities of future access associated with other sensor devices within said sensor net;

means for communicating information related to probabilities of future access to other sensor devices; and

means for routing measurement data within said scatter net in response to said means for calculating and said means for receiving.

17. The sensor device of claim 16, comprising:

means for receiving probabilities of future access from a mobile device, wherein said means for routing further operates in response to said means for receiving probabilities from a mobile device.

18. The sensor device of claim 16 wherein probabilities of access are correlated to a time of day.

19. The sensor device of claim 16 wherein said means of communicating information related to probabilities of future access to other sensor devices limits communication to information associated with a subset of sensor devices within said scatter net.

20. The sensor device of claim 19 wherein said means for communicating selects said subset of sensor devices in relation to respective probabilities of access to said subset of sensor devices and a cost function.

21. The sensor device of claim 16 wherein said means for routing employs source address routing to communicate measurement data originating at said sensor device.

22. The sensor device of claim 21 wherein said means for routing selects a plurality of collection points using said source address routing.

23. The sensor device of claim 22 wherein said plurality of collection points are selected by determining a probability of access to at least one of said plurality of collection points.

24. The sensor device of claim 19 wherein said means for routing includes randomization logic for directing measurement data beyond optimal paths defined by probabilities of future access to other sensor devices.

25. A method of operating a sensor net comprising:

determining probabilities of future access by mobile devices to nodes of said sensor net;

distributing information related to said determined probabilities through said sensor net; and

routing measurement data using said distributed information related to said determined probabilities.

26. The method of claim 25 wherein said determining probabilities comprises:

calculating time window averages of access attempts by mobile devices to respective nodes of said sensor net.

27. The method of claim 25 wherein said determining comprises:

receiving information from a mobile device related to future access activity of mobile devices.

28. The method of claim 25 wherein said distributing information comprises:

receiving at a first node identification of a plurality of collection points;

selecting a subset of said plurality of collection points using a cost function related to communicating to the plurality of collection points; and

communicating information related to said determined probabilities limited to said subset to a second node.